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(FILE 'HOME' ENTERED AT 09:44:59 ON 13 JAN 2004)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 09:45:08 ON 13 JAN 2004

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L2

QUE UDP-GLUCURONOSYL TRANSFERASE

FILE 'TOXCENTER, BIOSIS, CAPLUS, SCISEARCH, EMBASE, MEDLINE, PASCAL,
 DRUGU, ES BIOBASE, LIFESCI, USPATFULL' ENTERED AT 09:47:33 ON 13 JAN 2004

L3

688 S L2 AND (ISOLAT? OR PURIF? OR CHARACT?)

L4

301 S L3 AND HUMAN

L5	197 S L3 AND MOUSE
L6	423 S L3 AND RAT
L7	147 DUP REM L4 (154 DUPLICATES REMOVED)
L8	99 DUP REM L5 (98 DUPLICATES REMOVED)
L9	194 DUP REM L6 (229 DUPLICATES REMOVED)

L7 ANSWER 140 OF 147 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1981:238612 BIOSIS
DOCUMENT NUMBER: PREV198172023596; BA72:23596
TITLE: **CHARACTERIZATION OF MICROSOMAL BILIRUBIN AND P
NITRO PHENOL UDP GLUCURONOSYL
TRANSFERASE EC-2.4.1.17 ACTIVITIES IN HUMAN
LIVER A COMPARISON WITH RAT LIVER.**
AUTHOR(S): MAHU J-L [Reprint author]; PREAUX A-M; MAVIER P; BERTHELOT
P
CORPORATE SOURCE: UNITE RECHERCHES, INSERM U-99, HOP HENRI-MONDOR, F94010
CRETEIL, FR
SOURCE: Enzyme (Basel), (1981) Vol. 26, No. 2, pp. 93-102.
CODEN: ENZYBT. ISSN: 0013-9432.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB The bilirubin and p-nitrophenol UDP-glucuronosyltransferase (UDP-GT) activities were **characterized** from **human** liver microsomes and compared to those from rat liver. This study was performed on large samples of **human** liver obtained from 20 organ donors. The kinetic constants as well as sensitivities to digitonin, temperature, pH and diethylnitrosamine were determined. Apparently, UDP-GT activities have **characteristics** different in **human** and rat liver microsomal membranes. Differences in digitonin-induced activation, in thermodenaturation and in the response to diethylnitrosamine were found between bilirubin and p-nitrophenol UDP-GT activities. This supports the hypothesis of the probable heterogeneity of UDP-GT.

L7 ANSWER 138 OF 147 TOXCENTER COPYRIGHT 2004 ACS on STN DUPLICATE 42

ACCESSION NUMBER: 1983:82460 TOXCENTER
COPYRIGHT: Copyright 2004 BIOSIS
DOCUMENT NUMBER: PREV198376040823
TITLE: ELECTRO IMMUNOCHEMICAL QUANTIFICATION OF UDP
GLUCURONOSYL TRANSFERASE IN RAT LIVER
MICROSOMES
AUTHOR(S): PFEIL H [Reprint author]; BOCK K W
CORPORATE SOURCE: INST FUER PHARMAKOL UND TOXIKOL DER GEORG-AUGUST-UNIV ZU
GOETTINGEN, KREUZBERGRING 57, D-3400 GOETTINGEN, FRG
SOURCE: European Journal of Biochemistry, (1983) Vol. 131, No. 3,
pp. 619-624.
CODEN: EJBCAI. ISSN: 0014-2956.
DOCUMENT TYPE: Article
FILE SEGMENT: BIOSIS
OTHER SOURCE: BIOSIS 1983:283331
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20011116

AB Microsomal UDPglucuronosyltransferase(1-naphthol), an enzyme form previously shown to be selectively inducible in rat liver by 3-methylcholanthrene-type inducers, was **purified** to apparent homogeneity. Rabbit antibodies against this enzyme form precipitated UDPglucuronosyltransferase activities towards 1-naphthol and 4-methylumbelliferone faster and to greater extents than enzyme activities towards bilirubin, estrone and 4-hydroxybiphenyl. Ouchterlony double-diffusion analysis showed immunochemical similarity of the rat liver enzyme with the enzymes from other organs of the rat (kidney, testes) and the mouse liver but not with the enzyme from cat and **human** liver. Electroimmunochemical quantification of the enzyme indicated that its level was enhanced 1.3-fold and 2.5-fold in liver microsomes from phenobarbital-treated and 3-methylcholanthrene-treated rats, respectively. 3-Methylcholanthrene treatment increases the enzyme level of rat liver microsomal UDPglucuronosyltransferase(1-naphthol). Despite phospholipid-dependence of its catalytic activity microsomal enzyme activity appears to be a good index of the enzyme level.

L7 ANSWER 137 OF 147 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1984:353704 BIOSIS
DOCUMENT NUMBER: PREV198478090184; BA78:90184
TITLE: HEPATIC AND EXTRAHEPATIC GLUCURONIDATION OF BILE ACIDS IN
MAN **CHARACTERIZATION OF BILE ACID UDP
GLUCURONOSYL TRANSFERASE IN HEPATIC RENAL
AND INTESTINAL MICROSOMES.**
AUTHOR(S): MATERN S [Reprint author]; MATERN H; FARTHMAN E H; GEROK W
CORPORATE SOURCE: DIV HEPATOL AND GASTROENTEROL, DEP MED, UNIV FREIBURG I BR,
D-7800 FREIBURG IFR, FRG
SOURCE: Journal of Clinical Investigation, (1984) Vol. 74, No. 2,
pp. 402-410.
CODEN: JCINAO. ISSN: 0021-9738.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH

AB Microsomal UDP-glucuronosyltransferase (UDP-G) activity toward the bile acids (chenodeoxycholic, deoxycholic, ursodeoxycholic, lithocholic and glycolithocholic) was detected in **human** liver specimens, kidney and intestinal mucosa. The **characteristics** of hepatic and extrahepatic UDP-Glu activities toward these bile acids were compared with respect to kinetic parameters and other catalytic properties. Whereas no organ-specific differences in the affinities of individual bile acids to hepatic and extrahepatic UDP-Glu were observed, the individual bile acids showed reaction rates in liver that were about twice the rates estimated in kidney and about 2-3 times the rates observed in duodenal mucosa. In intestinal mucosa the rate of chenodeoxycholic acid glucuronidation exhibited a progressive decrease from duodenum to colon, where it was 30% of the duodenal level. Comparison of the glucuronidation rates that were estimated with different bile acids in hepatic or extrahepatic tissues showed that for each organ a bile acid structure-activity relationship existed, with highest activity observed for lithocholic and ursodeoxycholic acids, which was approx. 2-fold higher compared with chenodeoxycholic or deoxycholic acids. Lowest activity was estimated for glycolithocholic acid. UDP-Glu activity toward chenodeoxycholic acid was studied in biopsy specimens of liver that were obtained from a large group of patients with the following liver diseases: liver cirrhosis, liver fibrosis, granulomatous hepatitis and fatty liver. A significant decrease in enzyme activity was observed in patients with liver cirrhosis and in patients with granulomatous hepatitis compared with patients without liver disease.

L7 ANSWER 135 OF 147 TOXCENTER COPYRIGHT 2004 ACS on STN DUPLICATE 41
ACCESSION NUMBER: 1985:51647 TOXCENTER
COPYRIGHT: Copyright 2004 BIOSIS
DOCUMENT NUMBER: PREV198528044496
TITLE: **PURIFICATION CHARACTERIZATION AND
SUBCELLULAR LOCATION OF MULTIPLE ISOFORMS OF HUMAN
LIVER UDP-GLUCURONOSYL
TRANSFERASE EC-2.4.1.17**
AUTHOR(S): CHOWDHURY J R [Reprint author]; CHOWDHURY N R; STRAM R;
GROSS F; ARIAS I M
CORPORATE SOURCE: LIVER RES CENT, ALBERT EINSTEIN COLL MED, BRONX, NY, USA
SOURCE: Hepatology, (1984) Vol. 4, No. 5, pp. 1074.
Meeting Info.: 35TH ANNUAL MEETING OF THE AMERICAN
ASSOCIATION FOR THE STUDY OF LIVER DISEASES, CHICAGO,
ILL., USA, NOV. 10-11, 1984. HEPATOLOGY (BALTIMORE)
CODEN: HPTLD9. ISSN: 0270-9139.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BIOSIS
OTHER SOURCE: BIOSIS 1985:44496
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20011116

L7 ANSWER 136 OF 147 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 84:540195 SCISEARCH
THE GENUINE ARTICLE: TM817
TITLE: **PURIFICATION, CHARACTERIZATION AND
SUBCELLULAR LOCATION OF MULTIPLE ISOFORMS OF HUMAN
-LIVER UDP-GLUCURONOSYL
TRANSFERASE**
AUTHOR: CHOWDHURY J R (Reprint); CHOWDHURY N R; STRAM R; GROSS F;
ARIAS I M
CORPORATE SOURCE: YESHIVA UNIV ALBERT EINSTEIN COLL MED, LIVER RES CTR,
BRONX, NY, 10461
COUNTRY OF AUTHOR: USA
SOURCE: HEPATOLOGY, (1984) Vol. 4, No. 5, pp. 1074.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: ENGLISH
REFERENCE COUNT: No References

L7 ANSWER 128 OF 147 PASCAL COPYRIGHT 2004 INIST-CNRS. ALL RIGHTS
RESERVED. on STN

ACCESSION NUMBER: 1990-0144146 PASCAL
TITLE (IN ENGLISH): Chromosomal mapping of a **human** phenol
UDP-glucuronosyltransferase, GNT1
AUTHOR: HARDING D.; JEREMIAH S. J.; POVEY S.; BURCHELL B.
CORPORATE SOURCE: Ninewells hosp. medical school, univ. dep. biochemical
medicine, Dundee DD1 9SY, United Kingdom
SOURCE: Annals of human Genetics, (1990), 54(part 1), 17-21,
refs. 2 p.
ISSN: 0003-4800 CODEN: ANHGAA
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: CNRS-6308
AB A 5' fragment of a full-length cDNA clone encoding a **human**
phenol **UDP-glucuronosyl-transferase** was
used to produce a specific probe for this gene. DNA **isolated**
from a panel of 18 **human**-rodent somatic cell hybrids was
analysed by Southern-blot hybridization. The results indicate that this
UDP-glucuronosyltransferase is encoded by a single gene, designated GNT1,
located on **human** chromosome 2

L7 ANSWER 104 OF 147 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 27

ACCESSION NUMBER: 1995:415102 BIOSIS

DOCUMENT NUMBER: PREV199598429402

TITLE: **Characterization of benzazepine UDP-glucuronosyl-transferases** in laboratory animals and man.

AUTHOR(S): Hansen, K. T. [Reprint author]; Stentoft, K.

CORPORATE SOURCE: Dep. Drug Metabolism, Health Care Discovery Dev., Novo Nordisk A/S, Novo Nordisk Park, DK-2760 Malov, Denmark

SOURCE: Xenobiotica, (1995) Vol. 25, No. 6, pp. 611-622.

CODEN: XENOBH. ISSN: 0049-8254.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 27 Sep 1995

Last Updated on STN: 1 Nov 1995

AB 1. The O-glucuronidation of two dopamine D1 receptor antagonists, Odapipam and Berupipam, were studied in hepatic microsomal fractions from mouse, rat, rabbit, dog, pig, and man using 14C-UDP-glucuronic acid. 2. The influence of pH, detergent, gender, drug-metabolizing enzyme inducers, and age were examined. Detergents like the zwitterionic CHAPS and non-ionic Tween 20, Triton X-100, and Brij 35 stimulated the glucuronidation rate by up to 600% of native activity with the latter being most effective. Both apparent K-m and V-max increased following detergent treatment in rat hepatic microsomes. Less marked activation of UDP glucuronosyltransferase activity was observed with Brij 35 in mouse, rabbit, dog, and pig compared with rat. In contrast, **human** hepatic microsomes were not stimulated by detergent treatment. 3. Marked species-dependent **UDP-glucuronosyl transferase** activity were observed for the two compounds. In general, Odapipam exhibited higher V-max and K-m compared with Berupipam with the exception of rabbit where the reverse was true. Similar kinetic parameters were, however, observed in **human** hepatic microsomes. Highest glucuronidation rate (in general) was observed in mouse followed by dog, pig, rabbit, man, and rat. 4. UCT activity in **human** livers showed up to a seven-fold variation. Conjugation of each compound were highly correlated ($r = 0.92$; $n = 20$) suggesting that identical isoform(s) were involved in this reaction. A significant age-related decrease in UDP-glucuronosyltransferase activity was observed, which partly could be explained by a preponderance in elderly female donor liver samples.

L7 ANSWER 101 OF 147 TOXCENTER COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:175488 TOXCENTER
COPYRIGHT: Copyright 2004 ACS
TITLE: **UDP-glucuronosyl transferases**

AUTHOR(S): Remmel, R. P.
CORPORATE SOURCE: Department Medicinal Chemistry, University Minnesota,
Minneapolis, MN, 55455, USA.
SOURCE: Book of Abstracts, 212th ACS National Meeting, Orlando,
FL, August 25-29, (1996) pp. TOXI-053.
CODEN: 63BFAF.
COUNTRY: UNITED STATES
DOCUMENT TYPE: Conference
FILE SEGMENT: CAPLUS
OTHER SOURCE: CAPLUS 1996:416814
LANGUAGE: English
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20030106

AB Glucuronidation is an important biotransformation process that converts numerous xenobiotic and endogenous compds. into more water sol. products that are then excreted into urine or bile. Attachment of glucuronic acid may occur on aliph. and arom. hydroxyl, thiol, amino, hydroxylamino, and carboxylic acid groups. Like the P 450 enzymes, multiple **UDP-glucuronosyl-transferases** (UGTs) in humans and other species have been isolated, cloned, and expressed. Two major gene families, UGT1 and UGT2 have been identified, and several individual enzymes within these families with different substrate affinities have been characterized. In general, conjugation with glucuronic acid is considered to be a detoxification process. However, certain glucuronides, e.g. acyl glucuronides or N-O-glucuronides may have inherent reactivity resulting in binding to cellular macromols. Glucuronidation may also play a role in either bladder or colon cancer, by serving as a method of delivery of proximate carcinogens after hydrolysis of the glucuronides by β -glucuronidase.

L7 ANSWER 123 OF 147 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:600172 CAPLUS

DOCUMENT NUMBER: 115:200172

TITLE: The UDP glucuronosyltransferase gene superfamily:
suggested nomenclature based on evolutionary
divergence

AUTHOR(S): Burchell, Brian; Nebert, Daniel W.; Nelson, David R.;
Bock, Karl W.; Iyanagi, Takashi; Jansen, Peter L. M.;
Lancet, Doron; Mulder, Gerard J.; Chowdhury, Jayanta
Roy; et al.

CORPORATE SOURCE: Dep. Biochem. Med., Ninewells Hosp., Dundee, DD1 9SY,
UK

SOURCE: DNA and Cell Biology (1991), 10(7), 487-94
CODEN: DCEBE8; ISSN: 1044-5498

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A nomenclature system for the UDP glucuronosyltransferase superfamily is proposed, based on divergent evolution of the genes. A total of 26 distinct cDNAs in five mammalian species have been sequenced to date. Comparison of the deduced amino acid sequences leads to the definition of two families and a total of three subfamilies. For naming each gene, it is proposed that the root symbol UGT for **human** (ugt for mouse), representing "**UDP glucuronosyltransferase**", be followed by an Arabic no. denoting the family, a letter designating the subfamily, and an Arabic numeral representing the individual gene within the family or subfamily (hyphen before the Arabic no. for mouse), e.g., **human** UGT2B1 and murine Ugt2b-1. Whereas the gene and cDNA should be italicized, the corresponding transcript, protein, and enzyme activity should not be written with lowercase letters or in italics, e.g., **human** or murine UGT2B21. Recent exptl. evidence suggests that several exons of the UGT1 gene might be shared, indicating that distinct UGT1 transcripts and proteins may arise via alternative splicing; the gene and gene product of alternative splicing will be designated with an asterisk, e.g., UGT1*6 an UGT1*6, resp. When an orthologous gene between species cannot be identified with certainty, as occurs in the UGT2B subfamily, it is recommended that the genes be named in sequential chronol. as they become **characterized**. The **human** nomenclature system should be used for species other than the mouse. It is anticipated that this UGT gene nomenclature system will require updating on a regular basis.

L8 ANSWER 98 OF 99 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: .1980:182415 BIOSIS

DOCUMENT NUMBER: PREV198069057411; BA69:57411

TITLE: **PURIFICATION OF MOUSE LIVER UDP
GLUCURONOSYL TRANSFERASE.**

AUTHOR(S): BURCHELL B [Reprint author]

CORPORATE SOURCE: DEP BIOCHEM, MED SCI INST, UNIV, DUNDEE, SCOTL, UK

SOURCE: Medical Biology (Helsinki), (1979) Vol. 57, No. 5, pp.
265-268.

CODEN: MDBYAS. ISSN: 0302-2137.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: ENGLISH

AB A method is described for the **purification** of hepatic microsomal **UDP-glucuronosyl-transferase** from 2 different strains of **mice**, by a combination of detergent solubilization, ion-exchange chromatography and affinity chromatography. Using this procedure up to 0.5 mg of UDP-glucuronosyltransferase could be obtained from 30 g of **mouse** liver and this enzyme could be **purified** from as little as 10 g of **mouse** liver. MW of the apparently homogeneous preparation was 57,000 \pm 2000 when determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis. The **purified** transferase catalyzed the glucuronidation of .apprx. 0.6 μ mol 4-nitrophenol min⁻¹ .cntdot. mg⁻¹ protein. Immunochemical analysis of this preparation further indicates that UDPglucuronosyltransferase was **purified** to apparent homogeneity

L8 ANSWER 96 OF 99 TOXCENTER COPYRIGHT 2004 ACS on STN DUPLICATE 25
ACCESSION NUMBER: 1983:82460 TOXCENTER
COPYRIGHT: Copyright 2004 BIOSIS
DOCUMENT NUMBER: PREV198376040823
TITLE: ELECTRO IMMUNOCHEMICAL QUANTIFICATION OF UDP
GLUCURONOSYL TRANSFERASE IN RAT LIVER
MICROSOMES
AUTHOR(S): PFEIL H [Reprint author]; BOCK K W
CORPORATE SOURCE: INST FUER PHARMAKOL UND TOXIKOL DER GEORG-AUGUST-UNIV ZU
GOETTINGEN, KREUZBERGRING 57, D-3400 GOETTINGEN, FRG
SOURCE: European Journal of Biochemistry, (1983) Vol. 131, No. 3,
pp. 619-624.
CODEN: EJBCAI. ISSN: 0014-2956.
DOCUMENT TYPE: Article
FILE SEGMENT: BIOSIS
OTHER SOURCE: BIOSIS 1983:283331
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 20011116
Last Updated on STN: 20011116

AB Microsomal UDPglucuronosyltransferase(1-naphthol), an enzyme form previously shown to be selectively inducible in rat liver by 3-methylcholanthrene-type inducers, was **purified** to apparent homogeneity. Rabbit antibodies against this enzyme form precipitated UDPglucuronosyltransferase activities towards 1-naphthol and 4-methylumbelliferone faster and to greater extents than enzyme activities towards bilirubin, estrone and 4-hydroxybiphenyl. Ouchterlony double-diffusion analysis showed immunochemical similarity of the rat liver enzyme with the enzymes from other organs of the rat (kidney, testes) and the **mouse** liver but not with the enzyme from cat and human liver. Electroimmunochemical quantification of the enzyme indicated that its level was enhanced 1.3-fold and 2.5-fold in liver microsomes from phenobarbital-treated and 3-methylcholanthrene-treated rats, respectively. 3-Methylcholanthrene treatment increases the enzyme level of rat liver microsomal UDPglucuronosyltransferase(1-naphthol). Despite phospholipid-dependence of its catalytic activity microsomal enzyme activity appears to be a good index of the enzyme level.

L8 ANSWER 94 OF 99 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 23

ACCESSION NUMBER: 1984:185267 BIOSIS

DOCUMENT NUMBER: PREV198477018251; BA77:18251

TITLE: PURIFICATION OF A FORM OF MOUSE LIVER

UDP GLUCURONOSYL TRANSFERASE

EC-2.4.1.17 WHICH GLUCURONIDATES ANDROGENS.

AUTHOR(S): MACKENZIE P I [Reprint author]; OWENS I S

CORPORATE SOURCE: BUILD 10, ROOM 8C-416 NATL INST HEALTH, BETHESDA, MD 20205,
USA

SOURCE: Journal of Steroid Biochemistry, (1983) Vol. 19, No. 2, pp.
1097-1102.

CODEN: JSTBBK. ISSN: 0022-4731.

DOCUMENT TYPE: Article

FILE SEGMENT: BA

LANGUAGE: ENGLISH

AB A form of UDP glucuronosyltransferase active in the glucuronidation of the androgens, testosterone, androsterone and dihydrotestosterone was **purified** to apparent homogeneity as judged by sodium dodecylsulfate polyacrylamide gel electrophoresis from the livers of phenobarbital-treated C57BL/6N mice. This UDP glucuronosyltransferase is inactive towards estrone as substrate. Data from chromatofocusing and **purification** experiments suggest that testosterone and androsterone are glucuronidated primarily by this enzyme form and to a lesser extent by an enzyme form which has a slightly higher isoelectric point. However, this major form is only responsible for .apprx. 1/2 the capacity to glucuronidate dihydrotestosterone.